

Passiouras in “Escher Tiles” describes the process as follows:

“From 1938 to 1943, the Dutch artist M. C. Escher experimented with periodic tiling of the plane using a simple motif carved into a wooden block.

Escher rotated the block 90 degrees three times and labelled the four images thus created as 1, 2, 3 and 4.

Using a mirror image block and also two other blocks with the pattern going 'over' instead of 'under', he had 16 tiles at his disposal. The diagram below contains all 16 images as well as Escher's labelling scheme.

He would then select 4 of these blocks, arranged 2 by 2, and use this 'big tile' as a stamp to create patterns. He hand coloured some of these patterns.

To save you the trouble of carving wooden blocks, I have created an interactive application for exploring the patterns of Escher's ribbon tiles.”

**Provision for unique tiling element design:** In his diagram, Passiouras provides a display of all of Escher's sixteen variants of the single block carving (pp1, Figs. 1-4a). The interactive application provided by Passiouras allows the user to select four of the blocks to create a “big tile” which is then replicated to create a tiled pattern. Passiouras does not provide a method for the user to create the “block” with a variable number of weave elements with choices of shapes of “blocks” or tiles.

The present invention provides a method by which the “block” may be created using strings arranged according to one's own liking upon a tiling element of one's choice of shape. The current invention does not limit one to the use of a square tiling element or to the 16 Escher block designs, providing for an

unanticipated and non-obvious improvement over the application provided by Passiouras. The method and provision for one to create the tiling element or “block” is novel in the current invention.

**Repetitive weave design:** The novel provision of the present invention’s method to create the tiling element is novelty at the “block” or tiling element level, which does not depend upon the repetitiveness or non-repetitiveness of the overall design. Therefore, even though the Passiouras application provides for a repetitive weave design, the method by which it is derived (stamping repetitive images of “big tiles” of Escher’s blocks) does not anticipate the creative freedom provided by the present invention within the design of the tiling element or “block”. The provision for creation of a repetitive weave design is not the novelty of the present invention—The provision for creation of one’s own unique “block” or tiling element for use in a repetitive (or non-repetitive) design is novel compared to the Passiouras method of using the 16 previously-designed blocks.

**Provision for unique non-repetitive weave pattern:** Passiouras does not provide a method for creating a non-repetitive overall weave pattern. The overall pattern provided is a repeated “stamping” of the “big tile” over an area, and does not anticipate the possibility of a non-repetitive variant of the overall pattern.

The present invention deliberately and clearly provides the method by which one may create the non-repetitive or repetitive continuous weave pattern. This provision for one to selectively orient single or multiple “blocks” as desired contrasts with Passiouras’ provision to stamp uniform “big tiles” in uniform orientations into repetitive patterns.

Although Passiouras provides for one to select one of sixteen blocks for each of the four quadrants of the “big tile”, the “big tile” stamping over the area is not possible to singularly reorient within the area without reorienting all of the stamped “big tiles” within the area. A selection of “random” for orientations

within Passiouras' method simply randomly selects from a finite number (16) of previously designed blocks (Escher's 16 block designs) to create a "big tile" for use as a stamp. The resulting pattern with Passiouras' "random" pattern generation is a repetitive pattern of repeated "big tiles", with all the "big tiles" oriented the same way.

Although Passiouras' "big tile" could be considered a 2X2 non-repetitive weave pattern, Passiouras does not anticipate the extrapolation to any other size of non-repetitive pattern, and only uses the "big tile" as a stamp to create a repetitive pattern. The present invention provides for any size of overall pattern with any number of individually oriented tiles. Passiouras does not make obvious the ability to cover a tiled area with randomly-oriented blocks, but limits the choice of orientation to the bounds of the 2x2 square.

**Provision for continuous weave pattern:** Passiouras provides a method by which, depending on which of the sixteen blocks are chosen, some selections of the blocks can inadvertently result in non-continuous strands within the weave, with some appearing as isolated quadrilaterals and some of the weave strands leading to dead ends. The choices can also lead to continuous weave designs with repetition, but there are no instructions as to how to make the selections deliberately to ensure continuity of the woven strands. As claimed, the present invention provides for a "continuous weave design"

Applicant respectfully requests Examiner's reconsideration and withdrawal of the rejection to Claims 11, 12, 14, and 15.

### ***Claim Objection***

Examiner objected to Claim 13 as being dependent upon a rejected base claim.

Provided independent claim 11 is allowed, Applicant respectfully requests reconsideration and withdrawal of the objection to claim 13.

In consideration of the above, favorable reconsideration and Notice of Allowance are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SP', followed by a horizontal line.

Steven Perez

Date: December 5, 2007

Direct Communications To: Chante Harrison  
Please do not hesitate to call me at 831-246-3122